

1 **WHAT IS CLAIMED IS:**

1       1. A method for manufacturing an insert for a combustion head gasket  
2 includes the steps of: (a) providing a mold apparatus having an upper mold section  
3 and a lower mold section, said lower section defining a cavity adapted to receive a  
4 blank metal substrate; (b) placing a metal substrate into said cavity; (c) closing said  
5 upper mold section against the substrate to hold the insert in place under a first  
6 applied force; (d) applying a second force greater than the first to shape the insert; (e)  
7 supplying elastomeric material to selected predetermined portions of the blank metal  
8 substrate; and (f) curing the elastomeric material.

1       2. The method of claim 1 wherein said insert is adapted to seal an engine  
2 oil flow aperture of said combustion head gasket, said insert including a body portion  
3 adapted for registration with the oil flow aperture.

1       3. The method of claim 2 wherein said insert comprises a metallic body,  
2 and includes an elastomeric sealing bead bonded to said body, wherein said body is  
3 plastically deformed via said application of said second force to shape said insert.

1       4. The method of claim 3 wherein said insert is manufactured in a single  
2 mold process that includes said shaping of said insert body and said molding of said  
3 bead.

1       5. The method of claim 4 wherein said elastomeric sealing bead bonded  
2 to said body comprises a sealing portion disposed about a peripheral edge of said  
3 body portion of said insert body.

1       6. The method of claim 5 wherein said sealing body portion of said insert  
2 defines a closed loop, and wherein said insert further comprises radially extending  
3 arms provided for attachment of said insert to a combustion head gasket.

1           7.     The method of claim 6 wherein at least one of said arms comprises an  
2     offset elbow.

1           8.     The method of claim 7 wherein said elbow provides a connection  
2     between said arm and a shoulder portion of said insert, wherein said shoulder portion  
3     is contiguous with said peripheral edge of said closed loop portion of said insert.

1           9.     The method of claim 8 wherein said closed loop is generally non-  
2     circular.

1           10.    The method of claim 9 wherein said mold apparatus comprises die  
2     inserts for forming said insert.